**IN THE CLAIMS:**

The text of all pending claims, (including withdrawn claims) is set forth below. Cancelled and not entered claims are indicated with claim number and status only. The claims as listed below show added text with underlining and deleted text with ~~strikethrough~~. The status of each claim is indicated with one of (original), (currently amended), (cancelled), (withdrawn), (currently amended), (previously presented), or (not entered).

Please AMEND claims 11-14, 19 and 22, and ADD new claims 23-30 in accordance with the following:

Claims 1-10 (cancelled)

11. (Currently Amended) A method for monitoring particle concentration in a gas stream, comprising:

collecting particles by a sensor in the gas stream, the sensor integrated as a capacitive element into an electromagnetic resonant circuit;

exciting the resonant circuit with an alternating voltage;

determining a reference value of a characteristic variable of the resonant circuit, ~~which can vary~~ the characteristic variable varying as a result of particle load of the sensor, ~~as a~~ the reference value being determined when the sensor is not loaded, where the characteristic variable is one of a resonant frequency of the resonant circuit and a voltage across the sensor when the resonant circuit is excited by the alternating voltage having a fixed frequency and a fixed amplitude; and

determining a change in the characteristic variable brought about by the particle load compared to the reference value.

12. (Currently Amended) The method as recited in claim 11, wherein ~~the~~ a frequency of the alternating voltage exciting the resonant circuit is tuned to ~~a respective~~ determine the resonant frequency of the resonant circuit~~, and the frequency of the exciting voltage is determined~~ as the characteristic variable.

13. (Currently Amended) The method as recited in claim 12, further comprising heating the sensor, during said determining of the reference value of the characteristic variable, to a temperature below an ignition temperature of the particles and sufficient to remove impurities adhering to the sensor.

14. (Currently Amended) The method as recited in claim ~~13~~ 12, further comprising heating the sensor, before said determining of the reference value of the characteristic variable, to a temperature above the ignition temperature of the particles and sufficient to remove a particle load.

15. (Previously Presented) The device as recited in claim 14, wherein the particles are soot particles in an exhaust gas stream of an internal combustion engine.

16. (Previously Presented) A device, excited with alternating voltage, for monitoring particle concentration in a gas stream, comprising:

an electromagnetic resonant circuit excited with the alternating voltage;

a sensor in the gas stream, integrated as a capacitive element into the electromagnetic resonant circuit, collecting particles, having a nonconductive base body made of porous material and two electrodes spaced apart from one another; and

a characteristic variable determiner determining change in a characteristic variable of the electromagnetic resonant circuit, the characteristic variable varying as a result of particle load of said sensor, from a reference value determined when said sensor is not loaded due to having been heated above an ignition temperature of the particles, where the characteristic variable is one of a resonant frequency of the resonant circuit and a voltage across the sensor when the resonant circuit is excited by the alternating voltage having a fixed frequency and fixed amplitude.

17. (Previously Presented) The device as recited in claim 16, wherein the nonconductive base body is composed of ceramic.

18. (Previously Presented) The device as recited in claim 17, wherein the electrodes are embedded in the nonconductive base body.

19. (Currently Amended) The device as recited in claim ~~18~~ 17, wherein the electrodes are arranged on a side of the nonconductive base body inaccessible to the particles.

20. (Previously Presented) The device as recited in claim 19, further comprising a heating device heating said sensor above the ignition temperature of the particles prior to determining the reference value of the characteristic variable.

21. (Previously Presented) The device as recited in claim 20, wherein the base body includes a catalytically active layer.

22. (Currently Amended) The device as recited in claim ~~22~~ 21, wherein the particles are soot particles in an exhaust gas stream of an internal combustion engine.

23. (New) The device as recited in claim 16, wherein the electrodes are embedded in the nonconductive base body.

24. (New) The device as recited in claim 16, wherein the electrodes are arranged on a side of the nonconductive base body inaccessible to the particles.

25. (New) The device as recited in claim 16, further comprising a heating device heating said sensor above the ignition temperature of the particles prior to determining the reference value of the characteristic variable.

26. (New) The device as recited in claim 16, wherein the base body includes a catalytically active layer.

27. (New) The device as recited in claim 16, wherein the particles are soot particles in an exhaust gas stream of an internal combustion engine.

28. (New) The method as recited in claim 11, said determining of the reference value of the characteristic variable includes heating the sensor to a temperature below an ignition temperature of the particles and sufficient to remove impurities adhering to the sensor.

29. (New) The device as recited in claim 11, wherein the particles are soot particles in an exhaust gas stream of an internal combustion engine.

30. (New) An apparatus for monitoring soot particle concentration in a gas stream, comprising:

an electromagnetic resonant circuit excited with an alternating voltage of variable frequency;

a sensor in the gas stream, integrated as a capacitive element into the electromagnetic resonant circuit, collecting soot particles between electrodes of the capacitive element; and

a particle concentration estimator estimating the soot particle concentration in the gas stream based on a change in a resonance frequency of the electromagnetic resonant circuit due to the collected sooth particles in the sensor.